

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



10/533540

(10) International Publication Number
WO 2004/040606 A3

(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(51) International Patent Classification⁷: **H03K 17/96, G06F 3/033**

(21) International Application Number:
PCT/GB2003/004709

(22) International Filing Date: 31 October 2003 (31.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0225315.1 31 October 2002 (31.10.2002) GB
0225316.9 31 October 2002 (31.10.2002) GB

(71) Applicant (*for all designated States except US*): **HM TECHNOLOGY INTERNATIONAL LIMITED** [GB/GB]; Unit 18, Wadsworth Business Centre, 21 Wadsworth Road, Perivale, Middlesex UB6 7JD (GB).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **MAMIGONIANS**,

Hrand, Mami [GB/GB]; 123 Hamilton Road, London NW1 9EG (GB).

(74) Agent: **ATKINSON, Ralph**; Atkinson Burrington, 27-29 President Buildings, President Way, Sheffield S4 7UR (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW.

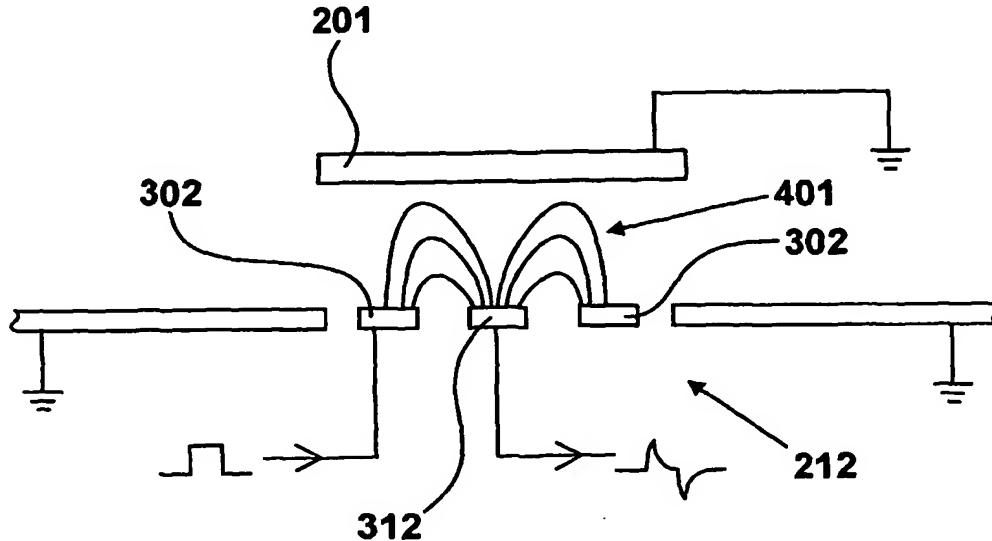
(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: MACHANICALLY OPERABLE ELECTRICAL DEVICE



WO 2004/040606 A3

(57) Abstract: Mechanically Operable Electrical Device A mechanically operable electrical device (102), comprising a transmitter electrode (302), a receiver electrode (312) and a moveable conductive element (201). The device is configured such that the conductive element is moveable to a first position remote from said electrodes such that the transmitter electrode is capacitance coupled to said receiver electrode, and the conductive element is moveable to a second position closer to the electrodes such that the capacitance coupling is reduced.



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
1 July 2004

INTERNATIONAL SEARCH REPORT

In national Application No
PCT/GB 03/04709A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H03K17/96 G06F3/033

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H03K G06F H01H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 452 514 B1 (PHILIPP HARALD) 17 September 2002 (2002-09-17) column 5, paragraph 2; figure 3A -----	1,3-6, 10,18
A	DE 37 30 899 C (BOSCH GMBH ROBERT) 6 October 1988 (1988-10-06) column 2, line 40 - column 3, line 19 -----	2,8,9,18
A	US 4 849 852 A (MULLINS BARRY) 18 July 1989 (1989-07-18) figures 2,4 -----	1,18
A	EP 1 253 717 A (DYNA SYSTEMS GMBH ;RAWE ELEKTRONIK GMBH (DE)) 30 October 2002 (2002-10-30) figure 1 -----	1-3

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the International search

Date of mailing of the International search report

10 February 2004

29.04.2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Socher, G

INTERNATIONAL SEARCH REPORT

national application No.
PCT/GB 03/04709

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-12, 18

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12,18

A mechanically operable electrical device, wherein a conductive element reduces the capacitance coupling between two electrodes by approaching the electrodes or by grounding.

2. claims: 13-17

A code reading apparatus that can read the capacitance coupling between electrodes of one or more corresponding regions.

3. claims: 19-33

A document interpreting system comprising a location detecting means and speech storage means for storing speech relating to different areas of a document and speech reproduction means.

INTERNATIONAL SEARCH REPORT

In
International Application No
PCT/GB 03/04709

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 6452514	B1 17-09-2002	EP 1153404 A1		14-11-2001
		JP 2003526831 T		09-09-2003
		WO 0044018 A1		27-07-2000
DE 3730899	C 06-10-1988	DE 3730899 C1		06-10-1988
US 4849852	A 18-07-1989	NONE		
EP 1253717	A 30-10-2002	DE 10121008 A1		31-10-2002
		EP 1253717 A2		30-10-2002